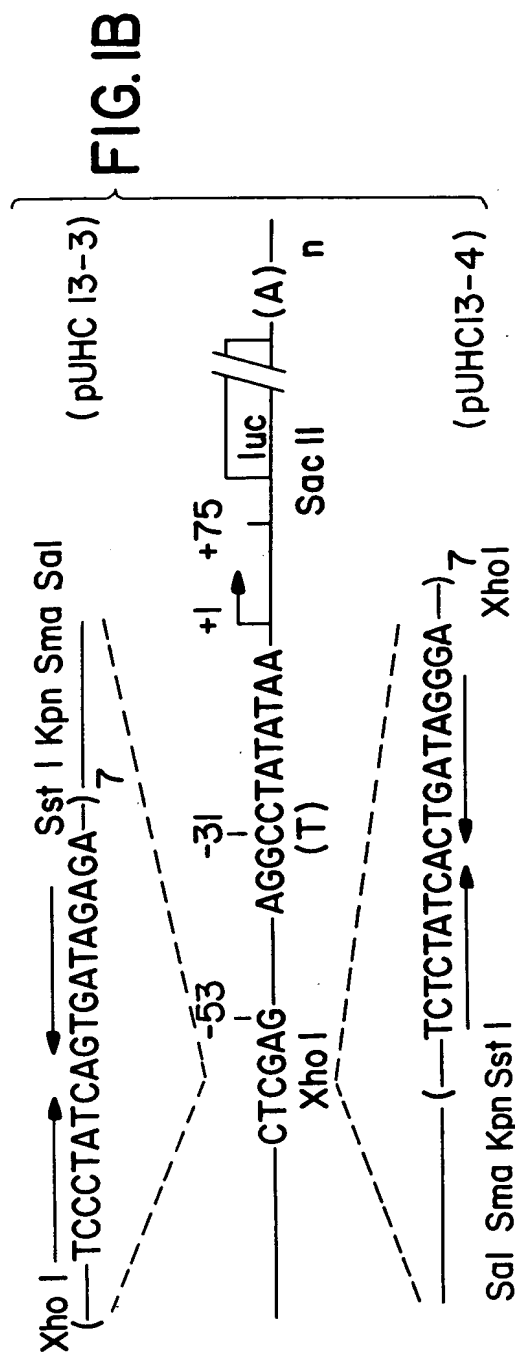
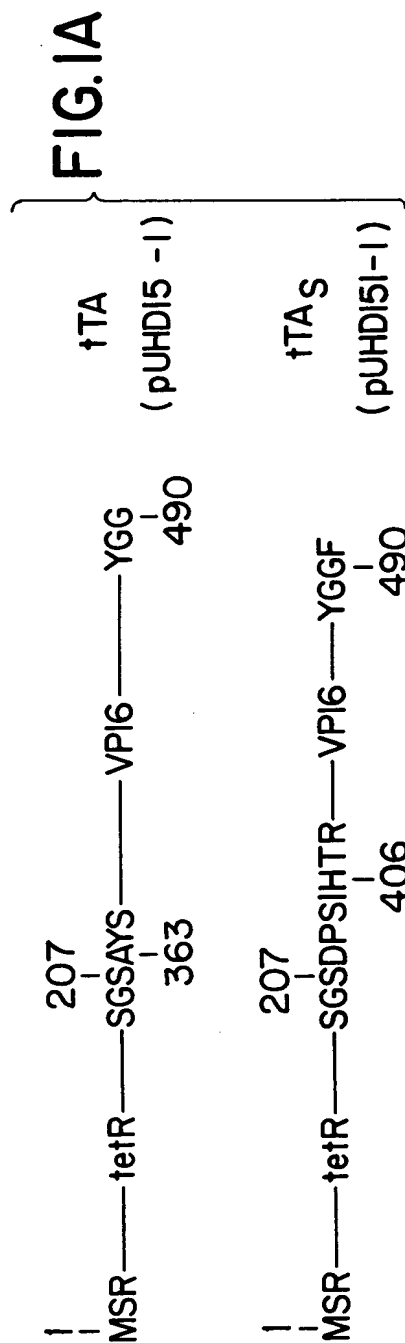
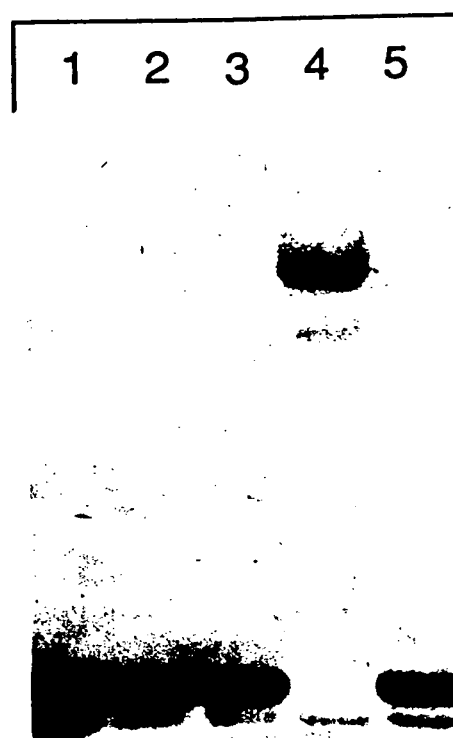
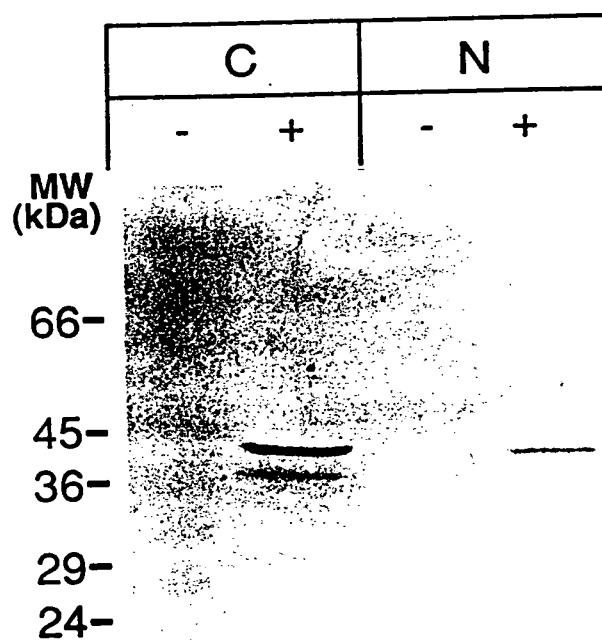


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FIG. 3A

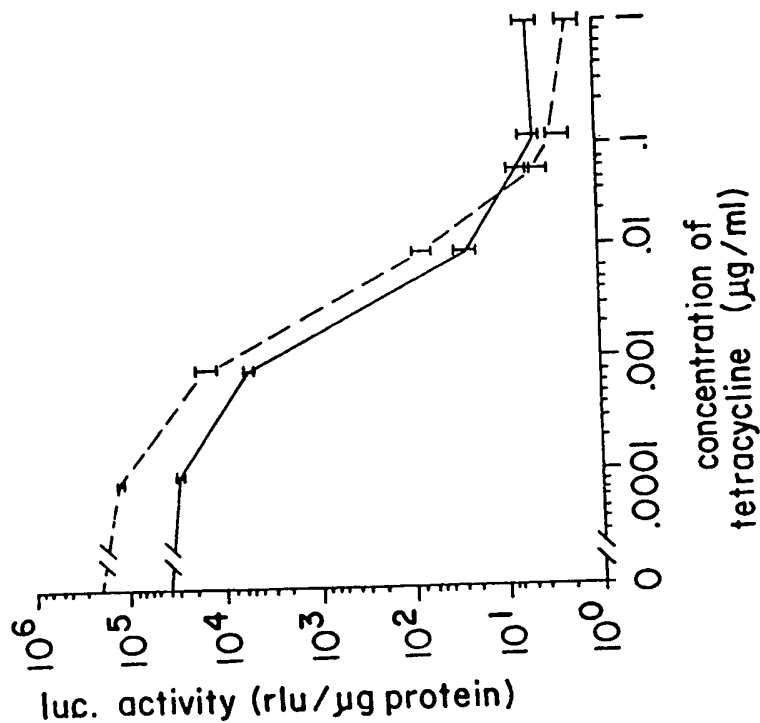
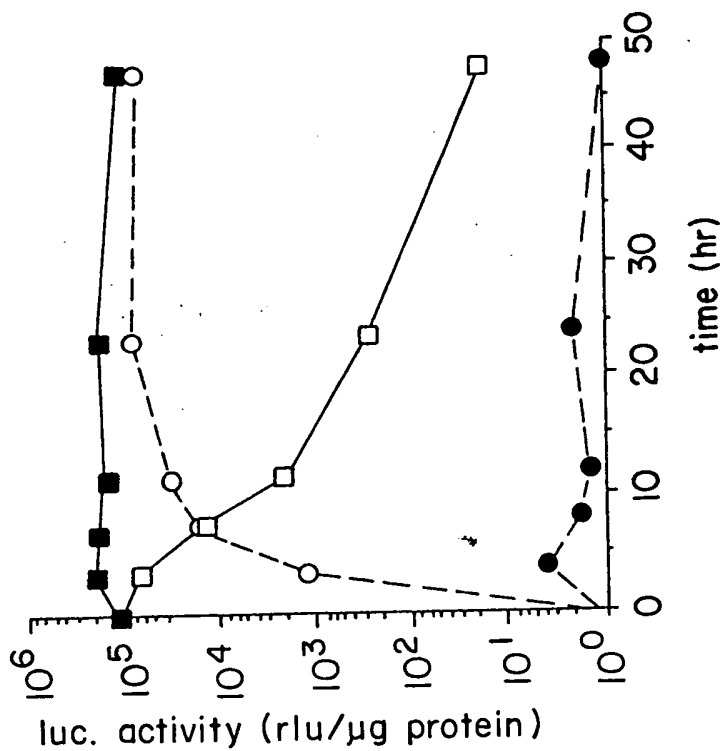


FIG. 3B





SECRET - 12978260

CTA AGT CAT CGC GAT GGA GCA AAA GTA CAT TTA GGT ACA CGG CCT ACA GAA AAA	Leu Ser His Arg Asp Gly Ala Lys Val His Leu Gly Thr Arg Pro Thr Glu Lys
CAG TAT GAA ACT CTC GAA AAT CAA TTA GCC TTT TTA TGC CAA CAA GGT TTT TCA	Gln Tyr Glu Thr Leu Glu Asn Gln Leu Ala Phe Leu Cys Gln Gln Gly Phe Ser
CTA GAG AAT GCA TTA TAT GCA CTC AGC GCT GTG GGG CAT TTT ACT TTA GGT TGC	Leu Glu Asn Ala Leu Tyr Ala Leu Ser Ala Val Gly His Phe Thr Leu Gly Cys
GTA TTG GAA GAT CAA GAG CAT CAA GTC GCT AAA GAA GAA AGG GAA ACA CCT ACT	Val Leu Glu Asp Gln Glu His Gln Val Ala Lys Glu Glu Arg Glu Thr Pro Thr
ACT GAT AGT ATG CCG CCA TTA TTA CGA CAA GCT ATC GAA TTA TTT GAT CAC CAA	Thr Asp Ser Met Pro Pro Leu Leu Arg Gln Ala Ile Glu Leu Phe Asp His Gln

Fig. 4B

GGT GCA GAG CCA GCC TTC TTA TTC GGC CTT GAA TTG ATC ATA TGC GGA TTA GAA  
Gly Ala Glu Pro Ala Phe Leu Phe Gly Leu Glu Ile Ile Cys Gly Leu Glu

AAA CAA CTT AAA TGT GAA AGT GGG TCC GCG TAC AGC CGC GCG CGT ACG AAA AAC  
Lys Gln Leu Lys Cys Glu Ser Glu Ser Ala Tyr Ser Arg Ala Arg Thr Lys Asn

AAT TAC GGG TCT ACC ATC GAG GGC CTG CTC GAT CTC CCG GAC GAC GAC GCC CCC  
Asn Tyr Gly Ser Thr Ile Glu Gly Leu Leu Asp Leu Pro Asp Asp Ala Pro

GAA GAG GCG GGG CTG GCG GCT CCG CGC CTG TCC TTT CTC CCC GCG GGA CAC ACG  
Glu Glu Ala Gly Leu Ala Ala Pro Arg Leu Ser Phe Leu Pro Ala Gly His Thr

CGC AGA CTG TCG ACG GCC CCC CCG ACC GAT GTC AGC CTG GGG GAC GAG CTC CAC  
Arg Arg Leu Ser Thr Ala Pro Pro Thr Asp Val Ser Leu Gly Asp Glu Leu His

Fig. 4C

00000-123456789

TTA GAC GGC GAG GAC GTG GCG ATG GCG CAT GCC GAC GCG CTA GAC GAT TTC GAT  
Leu Asp Gly Glu Asp Val Ala Met Ala His Ala Asp Ala Leu Asp Asp Phe Asp

CTG GAC ATG TTG GGG GAC GGG GAT TCC CCG GGT CCG GGA TTT ACC CCC CAC GAC  
Leu Asp Met Leu Gly Asp Gly Asp Ser Pro Gly Pro Gly Phe Thr Pro His Asp

TCC GCC CCC TAC GGC GCT CTG GAT ATG GCC GAC TTC GAG TTT GAG CAG ATG TTT  
Ser Ala Pro Tyr Gly Ala Leu Asp Met Ala Asp Phe Glu Phe Glu Met Phe

ACC GAT CCC CTT GGA ATT GAC GAG TAC GGT GGG TAG  
Thr Asp Pro Leu Gly Ile Asp Glu Tyr Gly Gly \*

Fig. 4D

660630 1429T2200

ATG TCT AGA TTA GAT AAA AGT AAA GTG ATT AAC AGC GCA TTA GAG CTG CTT AAT	
Met Ser Arg Leu Asp Lys Ser Lys Val Ile Asn Ser Ala Leu Glu Leu Leu Asn	
GAG GTC GGA ATC GAA GGT TTA ACA ACC CGT AAA CTC GCC CAG AAG CTA GGT GTA	
Glu Val Gly Ile Glu Gly Leu Thr Thr Arg Lys Leu Ala Gln Lys Leu Gly Val	
GAG CAG CCT ACA TTG TAT TGG CAT GTA AAA AAT AAG CGG GCT TTG CTC GAC GCC	
Glu Gln Pro Thr Leu Tyr Trp His Val Lys Asn Lys Arg Ala Leu Leu Asp Ala	
TTA GCC ATT GAG ATG TTA GAT AGG CAC CAT ACT CAC TTT TGC CCT TTA GAA GGG	
Leu Ala Ile Clu Met Leu Asp Arg His His Thr His Phe Cys Pro Leu Glu Gly	
GAA AGC TGG CAA GAT TTT TTA CGT AAT AAC GCT AAA AGT TTT AGA TGT GCT TTA	
Glu Ser Trp Trp Gln Asp Phe Leu Arg Asn Asn Ala Lys Ser Phe Arg Cys Ala Leu	

Fig. 5A



660220 149 FEB 60

CTA AGT CAT CGC GAT GGA GCA AAA GTA CAT TTA GGT ACA CGG CCT ACA GAA AAA  
Leu Ser His Arg Asp Gly Ala Lys Val His Leu Gly Thr Arg Pro Thr Glu Lys

CAG TAT GAA ACT CTC GAA AAT CAA TTA GCC TTT TTA TGC CAA CAA GGT TTT TCA  
Gln Tyr Glu Thr Leu Glu Asn Gln Leu Ala Phe Leu Cys Gln Gln Gly Phe Ser

CTA GAG AAT GCA TTA TAT GCA CTC AGC GCT GTG GGG CAT TTT ACT TTA GGT TGC  
Leu Glu Asn Ala Leu Tyr Ala Leu Ser Ala Val Gly His Phe Thr Leu Gly Cys

GTA TTG GAA GAT CAA GAG CAT CAA GTC GCT AAA GAA GAA AGG GAA ACA CCT ACT  
Val Leu Glu Asp Gln Glu His Gln Val Ala Lys Glu Glu Arg Glu Thr Pro Thr

ACT GAT AGT ATG CCG CCA TTA TTA CGA CAA GCT ATC GAA TTA TTT GAT CAC CAA  
Thr Asp Ser Met Pro Pro Leu Leu Arg Gln Ala Ile Glu Leu Phe Asp His Gln

Fig. 5B

000000-429T8260

GGT GCA GAG CCA GCC TTC TTA TTC GGC CTT GAA TTG ATC ATA TGC GGA TTA GAA  
Gly Ala Glu Pro Ala Phe Leu Phe Gly Leu Glu Ile Ile Cys Gly Leu Glu

AAA CAA CTT AAA TGT GAA AGT GGG TCT GAT CCA TCG ATA CAC ACG CGC AGA CTG  
Lys Gln Leu Lys Cys Glu Ser Gly Ser Asp Pro Ser Ile His Thr Arg Arg Leu

TCG ACG GCC CCC CCG ACC GAT GTC AGC CTG GGG GAC GAG CTC CAC TTA GAC GGC  
Ser Thr Ala Pro Pro Thr Asp Val Ser Leu Gly Asp Glu Leu His Leu Asp Gly

GAG GAC GTG GCG ATG GCG CAT GCC GAC GCG CTA GAC GAT TTC GAT CTG GAC ATG  
Glu Asp Val Ala Met Ala His Ala Asp Ala Leu Asp Asp Phe Asp Leu Asp Met

TTG GGG GAC GGG GAT TCC CCG GGT CCG GGA TTT ACC CCC CAC GAC TCC GCC CCC  
Leu Gly Asp Gly Asp Ser Pro Gly Pro Gly Phe Thr Pro His Asp Ser Ala Pro

Fig. 5C

TAC	GGC	GCT	CTG	GAT	ATG	GCC	GAC	TTC	GAG	TTT	GAG	CAG	ATG	TTT	ACC	GAT	GCC
Tyr	Gly	Ala	Leu	Asp	Met	Ala	Asp	Phe	Glu	Phe	Glu	Gln	Met	Phe	Thr	Asp	Ala

CTT GGA ATT GAC GAG TAC GGT GGG TTC TAG  
Leu Gly Ile Asp Glu Tyr Gly Gly Phe \*

**Fig 5D**

GAATTCCTCGAGTTTACCACCTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACCTC  
CCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACCTCCCTATCAGTGATAGAGAAAAGT  
GAAAGTCGAGTTTACCACCTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACCTCCC  
TATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACCTCCCTATCAGTGATAGAGAAAAGTGA  
AAGTCGAGTTTACCACCTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGCTCGGTACCCGGGT  
CGAGTAGCGGTGTACGGTGGGAGGCCCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCGC  
CTGGAGACGCCATCCACGCTGTTTGTGACCTCCATAGAAGACACCGGGACCGATCCAGCCCTCCGC

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Fig. 6

# THE 2000

GAATTCCTCGACCCGGGTACCGAGCTCGACTTTCACCTTTCTCTATCACTGATAGGAGTGCTA  
AACTCGACTTTCACCTTTCTCTATCACTGATAGGAGTGGTAAACTCGACTTTCACCTTTCTCTCT  
ATCACTGATAGGAGTGGTAAACTCGACTTTCACCTTTCTCTATCACTGATAGGAGTGGTAAA  
CTCGACTTTCACCTTTCTCTATCACTGATAGGAGTGGTAAACTCGACTTTCACCTTTCTCTAT  
CACTGATAGGAGTGGTAAACTCGACTTTCACCTTTCTCTATCACTGATAGGAGTGGTAAACT  
CGAGTAGCGGTACGGTGGGAGGCCCTATATAAGCAGAGCTCGTTTAGTGAAACCGTCAGATCGC  
CTGGAGACGCCATCCACGCTGTTTTGACCTCCATAGAAGACACCGGACCGATCCAGCCTCCGC

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Fig. 7

SECRET

GAGCTCGACTTTCACCTTTCTCTATCACTGATAGGAGTGGTAAACTCGACTTTCACCTTTCTCTC  
TATCACTGATAGGAGTGGTAAACTCGACTTTCACCTTTCTCTATCACTGATAGGAGTGGTAA  
ACTCGACTTTCACCTTTCTCTATCACTGATAGGAGTGGTAAACTCGACTTTCACCTTTCTCTCTA  
TCACTGATAGGAGTGGTAAACTCGACTTTCACCTTTCTCTATCACTGATAGGAGTGGTAAAC  
TCGACTTTCACCTTTCTCTATCACTGATAGGAGTGGTAAACTCGAGATCCGGCGGAATTTCGAAC  
ACGCAGATGCAGTCGGGGCGGGTCCGAGTCCACTTCGCATATTAAAGGTGACGCGTGTGG  
CCTCGAACACCGAG

Fig. 8

Fig. 9A

SECRET-4257320

GCTCTTCCCCGGCCCTGT CAGGGCAGAACCCCCAGACGGGAAGACGAGGCCACCGTCG  
TTGT CAGACGTGGAGGGCGCATTTCTGGAGTCGAAGCCCCGGAGGGGCAGGACAGCAGCT  
CGAGACCTCAGAAAAGGACAGCGGCCTGCTGGACAGTGTCTCGACACGCTCCTGGCGCCCTC  
GGTCCCGGCAGAGCCACGCCAGCCCTGCCACCTGCGAGGCCATCAGCCCGTGGTGCCTGTTT  
GGCCCCGACCTTCCCCGAAGACCCCCGGGCTGCCCCCGCTACCAAAGGGTGTGGCCCCCGCTCA  
TGAGCCGACCCGAGGACAAGGCAGGCGACAGCTCTGGGACGGCAGCGGCCACAAGTGCTGCC  
CAGGGGACTGT CACCATCCAGGCAGCTGTCTCTCCCTCTGGAGCCCTCACTGGCCGGCA  
GTGAAGCCATCCCCGCAGCCCGCTGCGGTGCAGTAGACGAGGAGGACAGCTCCGAATCCGAGG  
GCACCGTGGGCCCGCTCCTGAAGGGCCAACTCGGGCACTGGGAGGCA CGCGGCCGAGGAGG  
AGTGCCCCCGTCCGCTCTGGAGCGCGCCAGAGGCGTCGCCCTTGTCCCCAAGGAAGATTCT  
CGCTTCTCGGCGCCAGGGTCTCCTTGGCGGAGCAGGACGCGCGGTGGCGCCTGGCGCTCCC  
CGCTGGCCACCTCGGTGGTGGATTTCATCCACGTGCCCATCTGCTCTCAACACGCTTTCTCT  
GGCACCCGCAACAGGCAGCTGTGTGAGGGGAGAGCTACGACGGCGGGCGCGGCCGCGCAGC

Fig. 9B



**Fig. 9C**

AAATCCGCAGGAAAACTGCCCGCGTGTGCCCTTAGAAAAGTGTCTCAAGCTGGCATGGTCCT  
 TGGAGGGCGAAAGTTTAAAAAGTTCAATAAAGTCAGAGTCATGAGAGCACTCGATGCTGTTGCT  
 CTCCCACAGCCAGTGGCATTCCAAATGAAAGCCAAACGAATCACCTTTTCTCCAAGTCAAGAGA  
 TACAGTTAATTCCCCCTCTAATCAACCTGTTAATGAGCATGAACCAGATGTGATCTATGCAGG  
 ACATGACAAACAAAGCCTGATACCTCCAGTTCTTTGCTGACGAGTCTTAATCAACTAGGCGGAG  
 CGGCAACTTCTTTCAGTGGTAAATGGTCCAAATCTCTCCAGTTTTCGAAACTTACATATTG  
 ATGACCAGATAACTCTCATCCAGTATTCTTGGATGAGTTTAATGGTATTTGGACTAGGATGGAG  
 ATCCTACAAACATGTCAGTGGGCAGATGCTGTATTTTGACCTGATCTAATATTAAATGAACAG  
 CGGATGAAAGAATCATCTATTCTACTATGCCCTTACCATGTGGCAGATACCGCAGGAGTTTG  
 TCAAGCTTCAAGTTAGCCAAAGAGTTCTCTGTCATGAAAGTATTACTACTTCTTAATACAAT  
 TCCTTTTGAAGGACTAAGAAAGTCAAAGCCAGTTTGAAGAGATGAGATCAAGCTACATTAGAGAG  
 CTCATCAAGGCAATTGGTTTGAGGGCAAAAAGGAGTTGTTCCAGCTCACAGCGTTTCTATCAGC  
 TCACAAAACCTTCTTGATAAACTTGTCATGATCTTGTCAAACAACTTCACCTGTACTGCCCTGAATAC

Fig. 9D

ATTTATCCAGTCCCGGGCGCTGAGTGTGTGAATTTCCAGAAAATGATGCTCTGAAGTTATTGCTGCA  
CAGTTACCCAAGATAATTGGCAGGGATGGTGAAACCACTTCTCTTTCATAAAAAGTGAATGTCAA  
TTATTTTCAAAGAAATTAAGTGTGTGTGATGTCTTTTCGTTTGGTCAGGATTATGACGTCCTCG  
AGTTTTTATAATATCTGAAGGGAATTCCTGCAGCCCCGGGGATCCACTAGTTCTAGAGGATC  
CAGACATGATAAGATACATTGATGAGTTTGGACAAACCAACTAGATGCAGTGAAAAAAATG  
CTTTATTTGTGAAATTTGTGATGCTATTGCTTTTATTTGTAAACCATTAATAAGCTGCAATAAACAA  
GTTAACAAACAATTGCAATTCATTTTATGTTTCAGGTTCAGGGGAGGTGTGGAGGTTTTTT  
AAAGCAAGTAAACCTCTACAAATGTGGTATGGCTGATTATGATCCTGCAAGCCTCGTCGTCGTG  
GCCGGACCACGCTATCTGTGCAAGGTCCCCGGACGCGGCTCCATGAGCAGAGCGCCCGCCGCC  
GAGGCAAGACTCGGGCGGCCCTGCCCCGTCCCACCAAGTCAACAGCGGGTAACCGGCCCTCTTC  
ATCGGGAATGCGCGGACCTTCAGCATCGCCGGCATGTCCCCTGGCGGACGGGAAGTATCAGCT  
CGACCAAGCTTGGCGGAGATTTTCAGGAGCTAAGGAAGCTAAAAATGGAGAAAAAAATCACTGGAT  
ATACCACCGTTGATATATCCCAATGGCATCGTAAAGAACAATTTGAGGCATTTTCAGTCAGTTGCG

Fig. 9E

660600-42918200

CLASS

TCAATGTACCTATAACCAGACCGTTCAGCTGCATTAATGAATCGGCCAACGCCGGGAGAGGC  
GGTTTGCGTATTGGGCGCTCTTCCGCTTCCCTCGCTCACTGACTCGCTGCGCTCGGTCTCGGC  
TGCGGCGAGCGGTATCAGCTCACTCAAAGGCGTAATACGGTTATCCACAGAATCAGGGGATAA  
CGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAGGCCGCGTTG  
CTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGA  
GGTGGCGAAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCG  
CTCTCCTGTTCCGACCCCTGCCGCTTACCGGATACCTGTCCGCCCTTTCTCCCTTCGGGAAGCGTG  
GCGCTTTCTCAATGCTCACGCTGTAGGTATCTCAGTTCCGGTGTAGGTCGTTCCGCTCCAAGCTGG  
GCTGTGTGCACGAAACCCCGTTACGCCCGACCGCTGCCCTTATCCGGTAACTATCGTCTTGA  
GTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGA  
GCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAA  
GGACAGTATTTGGTATCTGCCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTC  
TTGATCCGGCAAAACAAACCGCTGGTAGCGGTGTTTTTTTTTTTGTTCGAAGCAGCAGATTACG

Fig. 9F

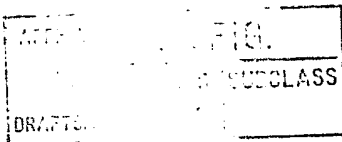
000000-429T8200

DRAFTS.

CGCAGAAAAAGGATCTCAAGAAGATCCTTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGA  
ACGAAACTCACGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCT  
TTTAAATTAAAAATGAAGTTTAAATCAATCTAAAGTATATAGTAATACTTGGTCTGACAGT  
TACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTCCATCCATAGTTG  
CCTGACTCCCCGTCGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCCAGTGCTGC  
AATGATACCGCGAGACCCACGCTCACGGCTCCAGATTTATCAGCAATAAACAGCCAGCCGGA  
AGGCCGAGCGCAGAGTGCTCCTGCAACTTTATCCGCCCTCCATCCAGTCTATTAATTGTTGCC  
GGGAAGCTAGAGTAAGTAGTTCGCCAGTTAATAAGTTTGCGCAACGTTGTTGCCATTGCTACAGG  
CATCGTGGTGTCACGCTCGTCGTTTGGTATGGCTTCATTCAGCTCCGGTTCCCAACGATCAAGG  
CGAGTTACATGATCCCCCATGTTGTGCAAAAAGCGGTTAGCTCCTTCGGTCCCTCCGATCGTTG  
TCAGAAAGTAAGTTGGCCGAGTGTTATCACTCATGTTATGCGAGCACTGCATAAATTCTCTTAC  
TGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATTCTGAGAA  
TAGTGTATGCGCGACCGAGTTGCTCTTGTCCCGGCTCAATACGGGATAATAACCGGCCACATA

Fig. 9G

660800" 14518260



GCAGAACTTTAAAGTGCTCATTTGGAAAACGTTCTTCGGGGCGAAAACCTCTCAAGGATCTT  
ACCGCTGTTGAGATCCAGTTCGATGTAAACCCACTCGTGCACCCAACTGATCTTCAGCATCTTTT  
ACTTTCACCCAGCGTTTCTGCGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAGGGAATAA  
GGCGGACACGGAAATGTTGAATACTCATACTCTTCCTTTTCAATAATTATTGAAGCATTTATCA  
GGTTATTGTCATGAGCGGATACATATTGGAATGTATTAGAAAATAAACAATAAGGGGTT  
CCGCGCACATTTCCCCGAAAAGTGCCACCTGACGCTAAGAAAACCATTTATCATGACATTAA  
CCTATAAAAATAGCGGTATCACGAGGCCCTTTTCGTC

Fig. 9H

SECRET 12913260

CTCGAGTTTACCACCTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACCTCCCTATC  
AGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACCTCCCTATCAGTGATAGAGAAAAGTGAAAGT  
CGAGTTTACCACCTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACCTCCCTATCAG  
TGATAGAGAAAAGTGAAAGTCGAGTTTACCACCTCCCTATCAGTGATAGAGAAAAGTGAAAGTCG  
AGTTTACCACCTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTCGGTACCCGGGTCGAGTA  
GGCGTGTAACGGTGGGAGGCCCTATATAAGCAGAGCTCGTTTAGTGAAACCGTCAGATCGCCTGGAG  
ACGCCATCCACGCTGTTTTTGACCTCCATAGAGACACCGGGACCGATCCAGCCTCCGGGCCCCC  
GAATTCCGCCACGACCATGACCATGACCCCTCCACACCAAAGCATCTGGGATGGCCCTACTGCA  
TCAGATCCAAGGAAACGAGCTGGAGCCCTGAACCGTCCGCAGCTCAAGATCCCCCTGGAGCGG  
CCCCCTGGCGAGGTGTACCTGGACAGCAGCAAGCCCGCGGTGTACAACCTACCCCGAGGGCGCCG  
CCTACGAGTTCAACGCCCGCGGCCCGCCCAACGCCGAGGTCTACGGTCAGACCGGCTCCCCCTA  
CGGCCCGGGTCTGAGGCTGCGGCGTTGCGCTCCAACGGCCTGGGGGTTTCCCCCCTCAAC  
AGCGTGCTCCGAGCCCGCTGATGCTACTGCACCCGCCCGCAGCTGTGCGCTTTCCTGCAGC

Fig. 10A

660000-1497880

CCCACGCCAGCAGGTGCCCTACTACCTGGAGAACGAGCCAGCGGCTACACGGTGCAGGAGGC  
CGGCCCGCCGGCATTCTACAGGCCAAATTCAGATAATCGACGCCAGGTGGCAGAGAAAGATTG  
GCCAGTACCAATGACAAAGGAAGTATGGCTATGGAATCTGCCAAGGAGACTCGCTACTGTGCAG  
TGTGCAATGACTATGCTTCAGGCTACCATTAATGAGTCTGGTCTGTGAGGGCTGCAAGGCCTT  
CTTCAAGAGAAAGTATTCAAGGACATAACGACTATATGTGTCCAGCCACCAACCAGTGACCATT  
GATAAAAACAGGAGGAAGAGCTGCCAGGCCCTCCGGCTCCGCAAAATGCTACGAAGTGGGAATGA  
TGAAAGGTGGGATACGAAAAGACCGAAGAGAGGGAGAAATGTTGAAACACAAGCGCCAGAGAGA  
TGATGGGAGGGCAGGGTGAAGTGGGTCTGTCTGGAGACATGAGAGCTGCCAACCTTTGGCCA  
AGCCCGCTCATGATCAAAACGCTCTAAGAAGAACAGCCTGGCCTTGTCCCTGACGGCCGACCAGA  
TGGTCATGGCCCTTGTGGATGCTGAGCCCCCCTACTCTATTCGAGTATGATCCTACCAGACC  
CTTCAGTGAAAGCTTCGATGATGGGCTTACTGACCAACCTGGCAGACAGGGAGCTGGTTCACATG  
ATCAACTGGGCGAAGAGGGTGCCAGGCTTTGTGGATTGACCCCTCCATGATCAGGTCCACCTTC  
TAGAATGTGCCCTAGAGATCCTGATGATTGGTCTCGTCTGGCGCTCCATGGAGCACCCAGT

Fig. 10B



GAAGCTACTGTTTGCTCCTAACTTGCTCTTGGACAGGAACCAGGAAAAATGTGTAGAGGGCATG  
GTGGAGATCTTCGACATGCTGCTGGCTACATCATCTCGGTTCCGCATGATGAATCTGCAGGGAG  
AGGAGTTTGTGTGCCCTCAAATCTATTAATTTTGCTTAATTTCTGGAGTGTAACATTTCTGTCCAG  
CACCTGAAAGTCTCTGGAAGAGAAGGACCATAATCCACCGAGTCCTGGACAAGATCACAGACACT  
TTGATCCACCTGATGGCCAAGCAGGCCCTGACCCCTGCAGCAGCACCGGCTGGCCCAGC  
TCCTCCTCATCCTCTCCACATCAGGCACATGAGTAACAAGGCATGGAGCATCTGTACAGCAT  
GAAGTGCAAGAACGTGTGTCCTCTATGACCTGCTGTGGAGATGCTGGACGCCACCGCCTA  
CATGCGCCCACTAGCCGTGGAGGGGCATCCGTGGAGGAGACGGACCAAAGCCACTTGGCCACTG  
CGGGCTCTACTTCATCGCATTCCTTGCAAAAGTATTACATCACGGGGAGGCAGGGTTTCCC  
TGCCACAGTCTGAGAGTCCCTGGCGGAATTGAGCTCGGTACCCGGGATCCTCTAGAGGATC  
CAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGATGCAGTGAAAAAATG  
CTTTATTTGTGAAATTTGTGATGCTATTGCTTTTATTTGTAAACCATTAAGCTGCAATAAACAA  
GTTAAACAACAACAAATTGCATTTTATTTTATGTTTCAGGTTCAGGGGAGGTGTGGAGGTTTTTTT

Fig. 10C

660000 42548250

AAAGCAAGTAAACCTCTACAAATGTGGTATGGCTGATTATGATCCTGCAAGCCTCGTCGTCTG  
GCCGACCAACGCTATCTGTGCAAGGTCCCCGGACGCGCTCCATGACGAGAGCCCCCGCCGCC  
GAGGCAAGACTCGGGCGGCCCTGCCCCGTCCACACAGGTCAACAGGCGGTAAACCGCCCTCTTC  
ATCGGGAATGCGCGGACCTTCAGCATCGCCGGCATGTCCCCTGGCGGACGGGAAGTATCAGCT  
CGACCAAGCTTGGCGAGATTTTCAGGAGCTAAGGAAGCTAAAAATGGAGAAAAAATCACTGGAT  
ATACCACCGTTGATATATCCCAATGGCATCGTAAAGAACATTTTGAGGCATTTTCAGTCAGTTGC  
TCAATGTACCTATAACAGACCGTTTCAGCTGCATTAATGAATCGGCCAACGCCGGGAGAGGC  
GGTTTGCGTATTGGGCGCTCTTCCGCTTCCCTCGCTCACTGACTCGCTGCGCTCGGTCTCGGC  
TGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTATCCACAGAATCAGGGGATAA  
CGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAAGGCCCGTTG  
CTGGCGTTTTCCTATAGGCTCCGCCCCCTGTACGAGCATCACAAAAATCGACGCTCAAGTCAGA  
GGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAAGCTCCCTCGTGCG  
CTCTCCTGTTCCGACCCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTG

*Fig. 10D*

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SECRET

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GGGCTTTCTCAATGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGTCTGCTCGCTCCAAGCTGG  
GCTGTGTGCACGAACCCCCCGTTACGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGA  
GTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGTGTAACAGGATTAGCAGA  
GCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAA  
GGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTC  
TTGATCCC GCAAAACAACACCGCTGGTAGCGGTGTTTTTTTGTGTTGCAAGCAGCAGATTACG  
CGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGA  
ACGAAAACTCACGTTAAGGATTTTGGTCTAGATATCAAAAAGGATCTTCACCTAGATCCT  
TTTAAATTAATAATGAAGTTTTTAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGT  
TACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTCCATAGTTG  
CCTGATCCCCGTCGTAGATAAATAAGATAACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCA  
ATGATACCGGAGACCCACGCTCACCGGCTCCAGATTATCAGCAATAAACAGCCAGCCGGAA  
GGGCCGAGCGAGAAGTGGTCTGTGCAACTTTATCCGCCCTCCATCCAGTCTATTAATTGTTGCCG

Fig. 10E

SEQUENCE 4294260

GGAAGCTAGTAAGTAGTTCGCCAGTTAATAGTTTGCGCAACGTTGTGCCATTGCTACAGGC  
ATCGTGGTGCACGCTCGTCTGTTTGGTATGGCTTCATTACAGCTCCGGTTCCTCAACGATCAAGGC  
GAGTTACATGATCCCCCATGTTGTGCAAAAAGCGGTTAGCTCCTTCGGTCTCCGATCGTTGT  
CAGAAGTAAGTTGGCCGCAGTGTATCACTCATGGTTATGGCAGCACTGCATAATTCTCTTACT  
GTCAATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATTCTGAGAAAT  
AGTGATGCGGCGACCGAGTTGCTCTTGCCCGGCGTCAATACGGGATAATACCGGCCACATAG  
CAGAACTTTAAAGTGCTCATCATTTGGAACCGTTCTTCGGGGCGAAAACCTCTCAAGGATCTTA  
CCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCAGCATCTTTTA  
CTTTCACACGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAGGGAATAAG  
GGCGACACGGAAATGTTGAATACTCATACTCTTCTTTTCAATAATTATTGAAGCATTTATCAG  
GGTTATTGCTCATGAGCGGATACATAATTGAAATGTATTTAGAAAATAAACAAATAGGGGTTTC  
CGCGCACATTTCCCCGAAAAGTGCCACCTGACGCTAAGAAACCATTTATTATCATGACATTAAAC  
CTATAAAAATAGGCGTATCACGAGGCCCTTTTCGTC

Fig. 10F

SECRET 14-00000

FIG. II

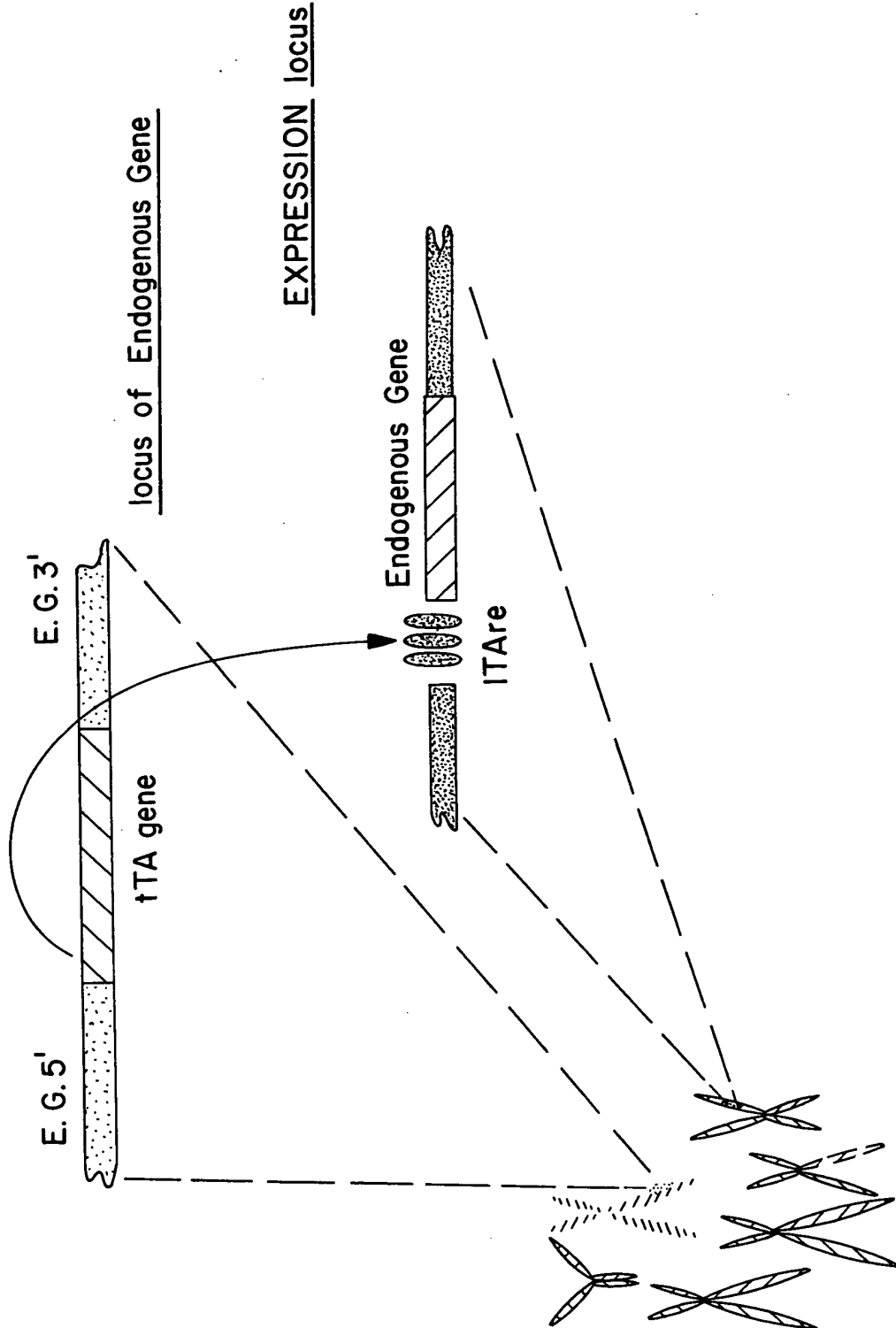
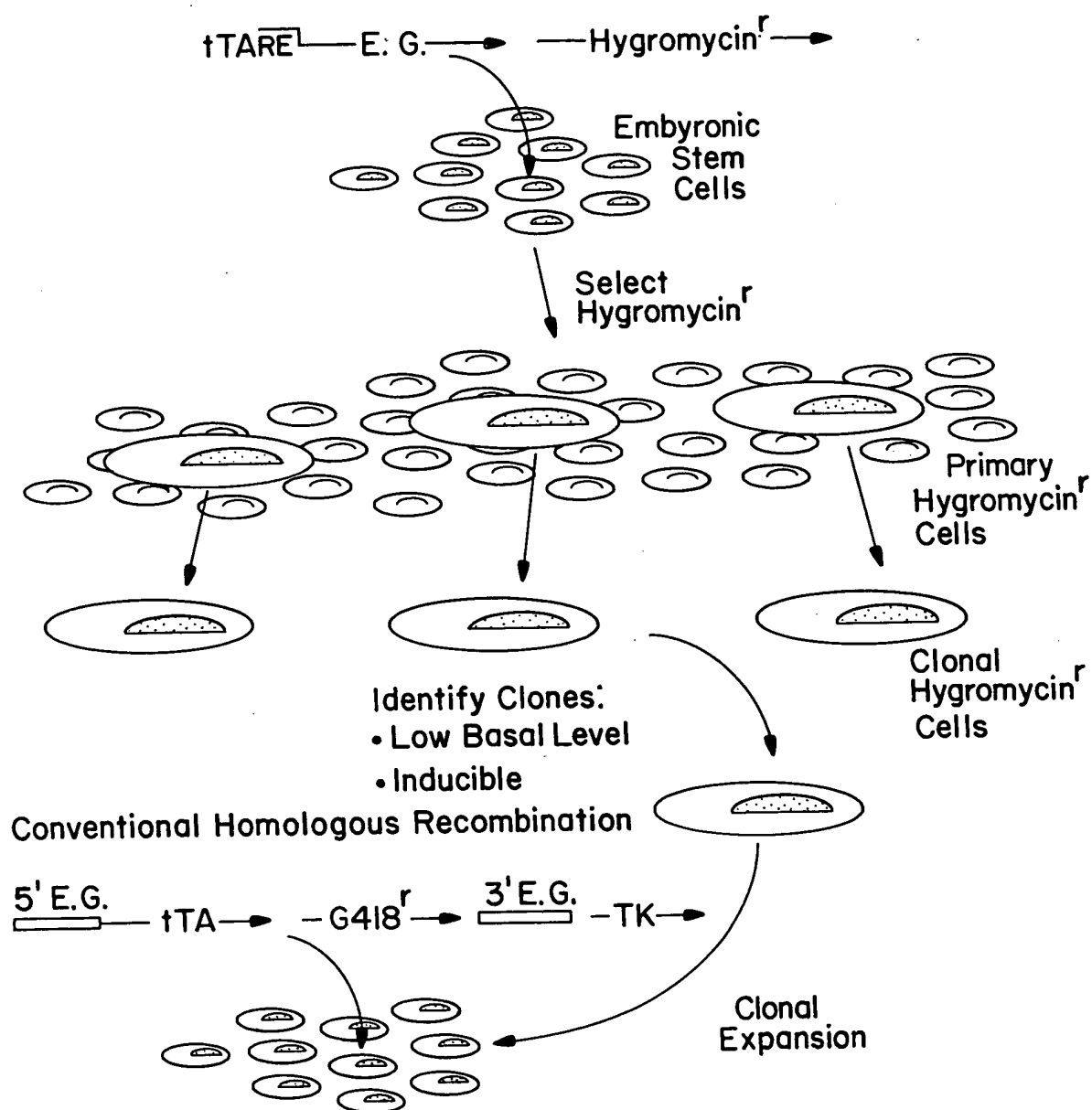
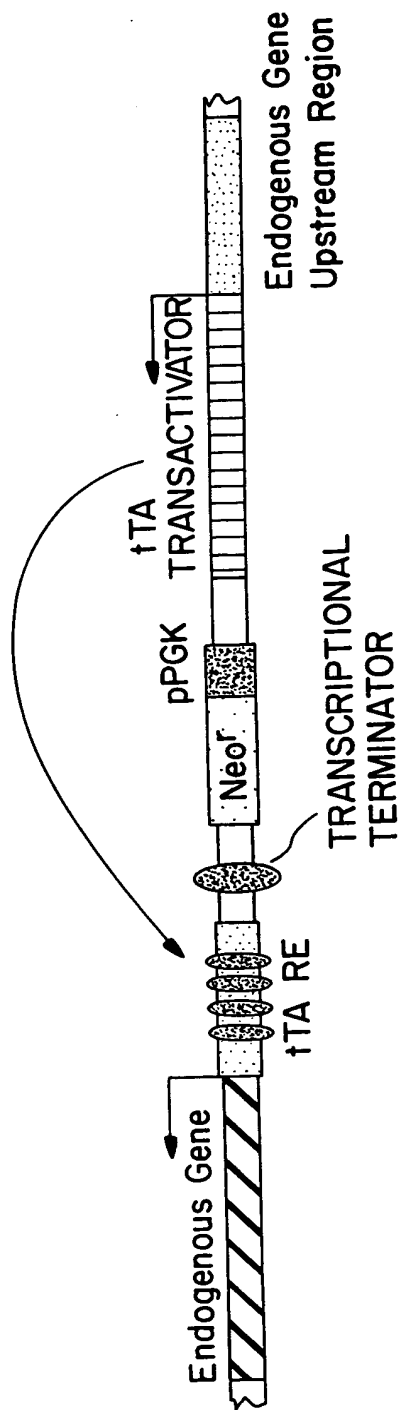


FIG. 12

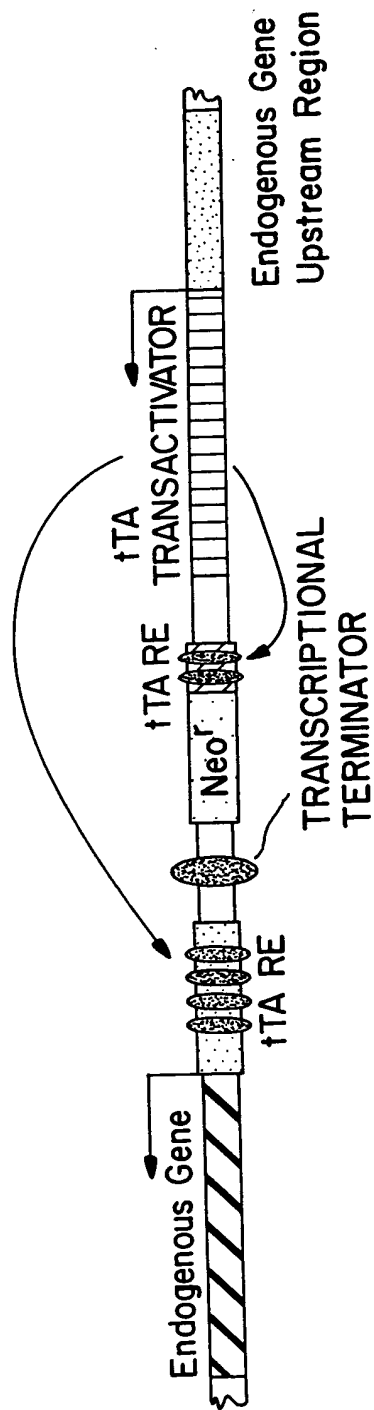


66060-12973260

**FIG. 13A**

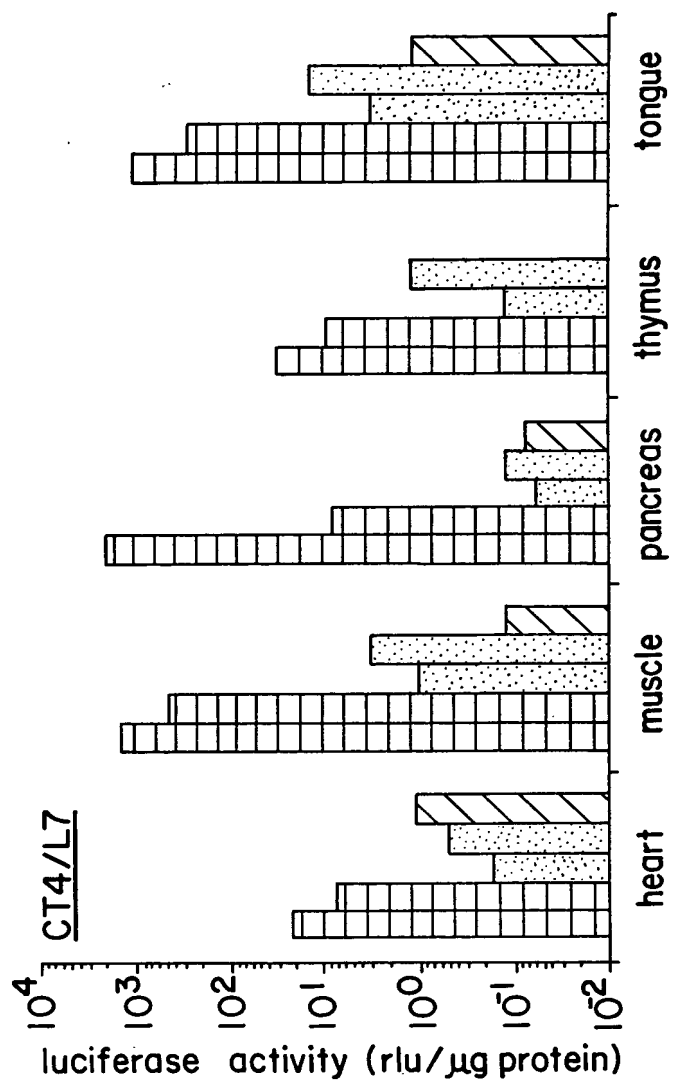


**FIG. 13B**



66060-12978260

FIG.14





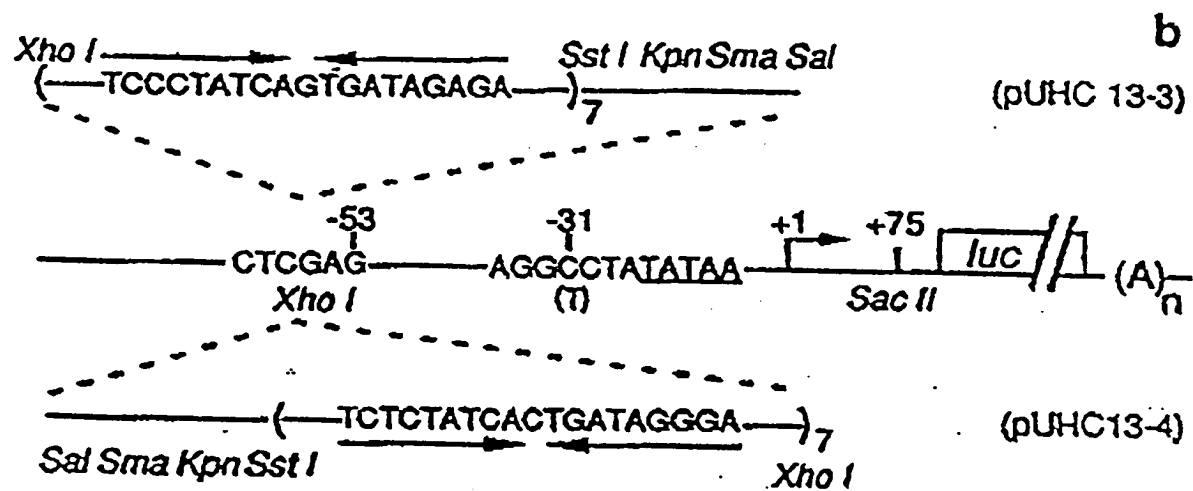
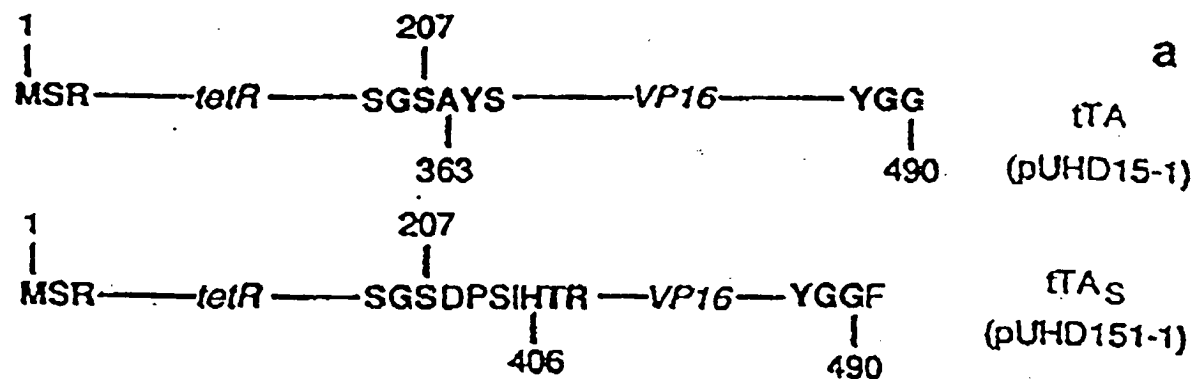


Fig. 1

00000-42518260

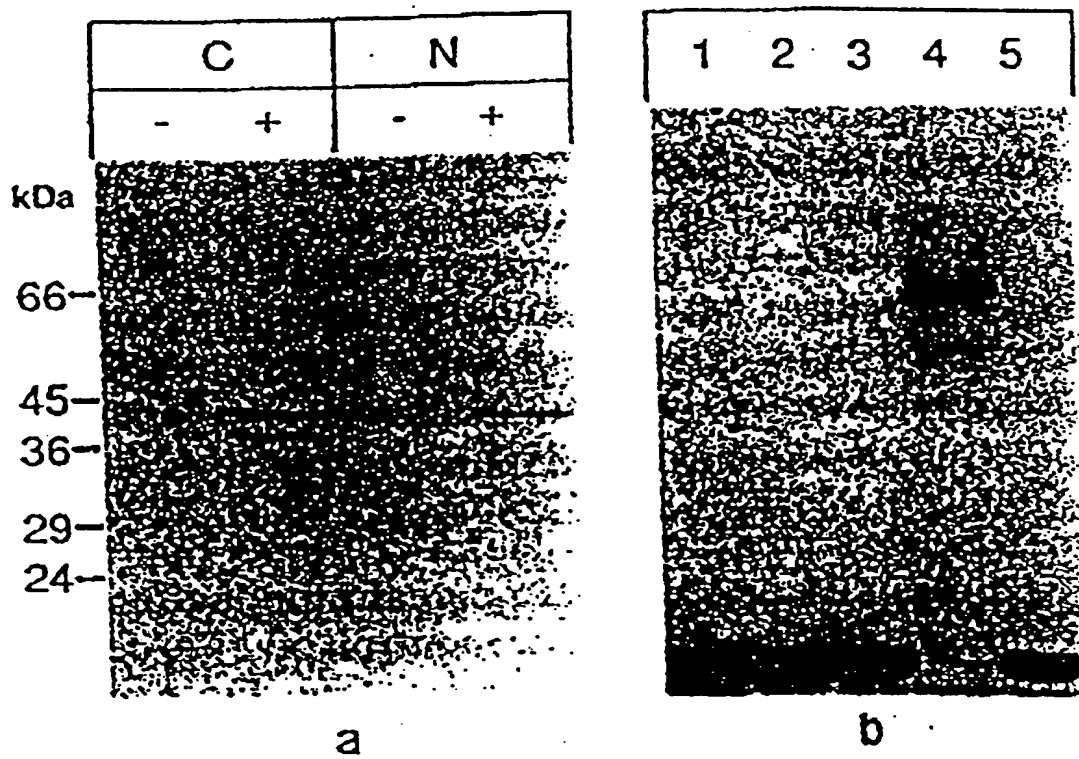


Fig. 2

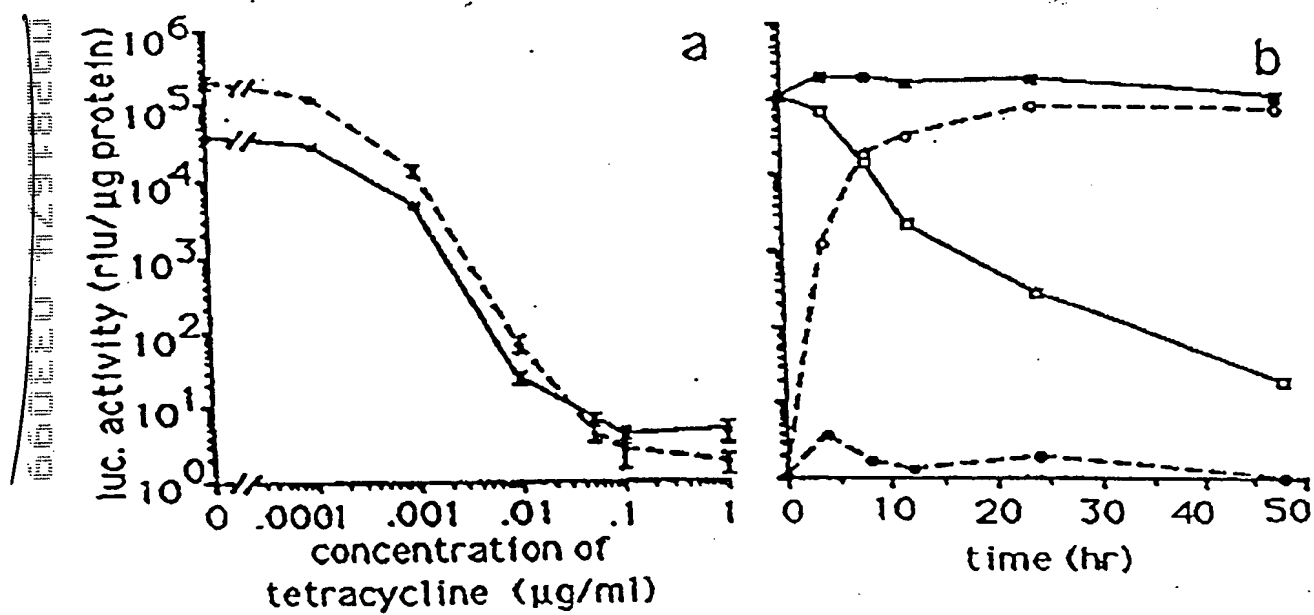


Fig. 3



1/1  
 ATG TCT AGA TTA GAT AAA AGT AAA GTG ATT AAC AGC GCA TTA GAG CTG CTT AAT GAG CTC  
 Met ser arg leu asp lys ser lys val ile asn ser ala leu glu leu leu asn glu val  
 61/21  
 GGA ATC CAA GGT TTA ACA ACC GGT AAA CTC CCC CAG AAG CTA GGT GTA CAG CAG GGT ACA  
 gly ile glu gly leu thr thr arg lys leu ala gln lys leu gly val glu gln pro thr  
 121/41  
 TTG TAT TGC CAT GTA AAA AAT AAG CCG GCT TTC CTC CAC GGC TTA GGC ATT CAG ATG TTA  
 leu tyr trp his val lys asn lys arg ala leu leu asp ala leu ala ile glu met leu  
 181/61  
 GAT AGG CAC CAT ACT CAC TTT TGC CCT TTA GAA GGG GAA AGC TGG CAA GAT TTT TTA GGT  
 asp arg his his thr his phe cys pro leu glu gly glu ser trp gln asp phe leu arg  
 241/81  
 AAT AAC GGT AAA AGT TTT ACA TGT GGT TTA CTA AGT CAT CCG GAT CCA CCA AAA GTA CAT  
 asn asn ala lys ser phe arg cys ala leu leu ser his arg asp gly ala lys val his  
 301/101  
 TTA GGT ACA CCG GGT ACA GAA AAA CAG TAT CAA ACT CTC CAA AAT CAA TTA GGC TTT TTA  
 leu gly thr arg pro thr glu lys gln tyr glu thr leu glu asn gln leu ala phe leu  
 361/121  
 TGC CAA CAA GGT TTT TCA CTA GAC AAT CCA TTA TAT GCA CTC AGC GGT GTC GGC CAT TTT  
 cys gln gln gly phe ser leu glu asn ala leu tyr ala leu ser ala val gly his phe  
 421/141  
 ACT TTA GGT TGC GTA TTC GAA CAT CAA CAG CAT CAA GAA GTC GGT AAA GAA GAA AGC GAA ACA  
 thr leu gly cys val leu glu asp gln glu his gln val ala lys glu glu arg glu thr  
 481/161  
 GGT ACT ACT GAT AGT ATG CCG CCA TTA TTA GGA CAA GGT ATC GAA TTA TTT GAT CAC CAA  
 pro thr thr asp ser met pro pro leu leu arg gln ala ile glu leu phe asp his gln  
 541/181  
 GGT CCA CAG CCA GGC TTC TTA TTC GGC CTT CAA TTC ATC ATA TGC GGA TTA CAA AAA CAA  
 gly ala glu pro ala phe leu phe gly leu glu leu ile ile cys gly leu glu lys gln  
 601/201  
 CTT AAA TGT CAA AGT GGG TCT GAT CCA TCG ATA CAC CAC TTA ACG GGC AGA CTG TCG ACG GGC GGC  
 leu lys cys glu ser gly ser asp pro ser ile his thr arg arg leu ser thr ala pro  
 661/221  
 CCG ACG GAT GTC AGC CTG GGG CAC CAG CTC CAC TTA GAC GGC GAG CAC GTC GGC ATC GGC  
 pro thr asp val ser leu gly asp glu leu his leu asp gly glu asp val ala met ala  
 721/241  
 CAT GGC GAC GGC CTA GAC GAT TTC GAT CTC CAC ATC TTG GGC GAC GGC CAT TCC GGC GGT  
 his ala asp ala leu asp asp phe asp leu asp met leu gly asp gly asp ser pro gly  
 781/261  
 CCG GGA TTT ACC GGC CAC CAC TCC GGC CTT TAC GGC GGT CTG GAT ATG GGC GAC TTC CAG  
 pro gly phe thr pro his asp ser ala pro tyr gly ala leu asp met ala asp phe glu  
 841/281  
 TTT GAG CAG ATG TTT ACC GAT GGC CTT GGA ATT GAC CAG TAC OCT GGC TTC TAC  
 phe glu gln met phe thr asp ala leu gly ile asp glu tyr gly gly phe AMB

Fig. 5

GAATTCCTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTC  
CCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGT  
GAAAGTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCC  
TATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGA  
AAGTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGCTCGGTACCCGGGT  
CGAGTAGGCGTGTAAGGTGGGAGGCCTATATAAGCAGAGCTCGTTTGTGAACCGTCAGATCGC  
CTGGAGACGCCATCCACGCTGTTTTGACCTCCATAGAAGACACCGGGACCGATCCAGCCTCCGC  
GG

Fig. 6

GAATTCCTCGACCCGGGTACCGAGCTCGACTTTCACCTTTTCTCTATCACTGATAGGGAGTGGTA  
AACTCGACTTTCACCTTTTCTCTATCACTGATAGGGAGTGGTAAACTCGACTTTCACCTTTTCTCT  
ATCACTGATAGGGAGTGGTAAACTCGACTTTCACCTTTTCTCTATCACTGATAGGGAGTGGTAAA  
CTCGACTTTCACCTTTTCTCTATCACTGATAGGGAGTGGTAAACTCGACTTTCACCTTTTCTCTAT  
CACTGATAGGGAGTGGTAAACTCGACTTTCACCTTTTCTCTATCACTGATAGGGAGTGGTAAACT  
CGAGTAGGCGTGTAACGGTGGGAGGCCATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCGC  
CTGGAGACGCCATCCACGCTGTTTTGACCTCCATAGAAGACACCGGGACCGATCCAGCCTCCGC  
GG

Fig. 7

GAGCTCGACTTTCACITTTTCTCTATCACTGATAGGGAGTGGTAAACTCGACTTTCACITTTTCTC  
TATCACTGATAGGGAGTGGTAAACTCGACTTTCACITTTTCTCTATCACTGATAGGGAGTGGTAA  
ACTCGACTTTCACITTTTCTCTATCACTGATAGGGAGTGGTAAACTCGACTTTCACITTTTCTCTA  
TCACTGATAGGGAGTGGTAAACTCGACTTTCACITTTTCTCTATCACTGATAGGGAGTGGTAAAC  
TCGACTTTCACITTTTCTCTATCACTGATAGGGAGTGGTAAACTCGAGATCCGGOGAATTQGAAC  
ACGCAGATGCAGTCGGGGCGGCGCGGTCCGAGGTCCACTTCGCATATTAAGGTGACCGGTGTGG  
CCTCGAACACCGAG

Fig. 8



Fig. 9A

CTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATC  
 AGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGT  
 CGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATCAG  
 TGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCG  
 AGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGCTCGGTACCCGGGTGAGTA  
 GCGGTGTACGGTGGGAGGCCATATAAGCAGAGCTCGTTTGTGTGAACCGTCAGATCGCCTGGAG  
 ACGCCATCCACGCTGTTTGTACCTCCATAGAAGACACCGGGACCGATCCAGCCTCCGGGGCCCC  
 GAAATTCGAGCTCGGTACCGGGCCCCCCTCGAGGTGACCGGTATCGATAGCTTGATATCGAAT  
 TCCAGGAGGTGGAGATCCGGGGGTCCAGCCAAACCCACACCCATTTCCTCCCTCTGCCCC  
 TATATCCCGGCACCCCCCTCCCTCCTAGCCCTTTCCCTCCTCCCGAGAGACGGGGGAGGAGAAAAG  
 GGGAGTTTACGGTGCACATGACTGAGCTGAAGGCAAAGGAACCTCGGGCTCCCCACGTGGCGGGC  
 GGCGCGCCTCCCCCCACCGAGGTGCGATCCAGCTCCTGGGTCCCGCGGACCCCTGGCCCCCTTCC  
 AGGGGAGCCAGACCTCAGAGGCTCGTCTGTAGTCTCCGGCATCCCATCTCCCTGGACGGGT  
 GCTCTTCCCCCGGCCCTGTACGGGGCAGAACCCCCCAGACGGGAAGACCGCAGGACCCACCGTCG  
 TTGTGAGACGTGGAGGGCGCATTTCCTGGAGTCGAAGCCCCGGAGGGGGCAGGAGACAGCAGCT  
 CGAGACCTCCAGAAAAGGACAGCGGCCCTGCTGGACAGTGTCTCTCGACACGCTCCTGGCGGCCCTC  
 GGGTCCCGGGCAGAGCCACGCCAGCCCTGCCACCTGCGAGGCCATCAGCCCGTGGTGCCTGTTT  
 GGCCCCGACCTTCCCGAAGACCCCCGGGCTGCCCCCGCTACCAAAGGGGTGTGGCCCCGCTCA  
 TGAGCCGACCCGAGGACAAGGCAGGCGACAGCTCTGGGACGGCAGCGGCCACAAAGGTGCTGCC  
 CAGGGGACTGTACCATCCAGGCAGCTGCTGCTCCCTCCTCTGGGAGCCCTCACTGGCCCGCA  
 GTGAAGCCATCCCGCAGCCCCGCTGCGGTGCAGGTAGACGAGGAGGACAGCTCCGAATCCGAGG  
 GCACCGTGGGGCCCGCTCCTGAAGGGCCAACCTCGGGCACTGGGAGGCACGGCGGCCGGAGGAGG  
 AGCTGCCCCCGTCCGCTCTGGAGGGCCCGCAGGAGGGGTGCCCCCTGTCCCAAGGAAGATTCT  
 CGCTTCTCGGGCGCCACGGGTCTCCTTGCGCGAGCAGGACCGCGCCGGTGGCGCCCTGGGGCGCTCCC  
 CGCTGGCCACCTCGGTGCTGGAATTCATCCACGTGCCCATCCTGCTCTCAACCAAGCTTTCTT  
 GGCCACCCCGCACCAGGCAGCTGCTGGAAGGGGAGAGCTACGAAGGCGGGGCGCGGCCCGCCAGC  
 CCTTCGTCCCGCAGCGGGCTCCCCCTCTGCTCTGCTCCACCCCTGTGGCGGGCGGGCAGTTCC  
 CCGACTGCACCTACCCGCCCCGACGCGGAGGCCAAAGATGACCGGTTCCTCCTCTACGGCGACTT  
 CCAGCCGCCCCGCCCTCAAGATAAAGGAGGAGGAAGAAGCCGCCGAGGCCGCGGGCGGCTCCCCG  
 CGTACGTACCTGGTGGCTGGTGCAACCCCGCCCGCTTCCCGGACTTCAGCTGGCAGCGCCCC  
 CGCCACCTCGCTGCGGCCCTCGAGTGCCCTCGTCCAGAACCCGGGGAAGCGGCGGTGGCGGCCCTC

Fig. 9B

CCCAGGCAGTGCCTCCGTCTCCTCCTCGTCTCGTGGGGTGGACCTGGAGTGCAATCGTGATAC  
 AAGGCAGAAGGCGCGCCGCCCCAGCAGGGCCCTTCGGCGCCGCTGCCTGCAAGCCTCCGGGGCG  
 CCGGCGCCTGCTGCTCCCGCGGGACGGCCTGCCCTCCACCTCCGCTCGGGGCGCAGCCGCCCG  
 GGCCGCCCTTCGGCTCTACCCGACGCTCGGCCTCAACGGACTCCCGCAACTCGGCTACCAGGCC  
 GCCGTGCTCAAGGAGGGCCTGCCCGCAGGTCTACACGCCCTATCTCAACTACCTGAGGCCGGATT  
 CAGAAGCCAGTCAGAGCCCACAGTACAGCTTCGAGTCACTACCTCAGAAGATTGTTTGTGATCTG  
 TGGGGATGAAGCATCAGGCTGTCTATTATGGTGTCTCACCCTGTGGGAGCTGTAAAGTCTTCTTT  
 AAAAGGGCAATGGAAGGGCAGCATAACTATTTATGTGCTGGAAGAAATGACTGCATTGTTGATA  
 AAATCCGCAGGAAAACTGCCCGGGCGTGTGGCTTAGAAAGTGGTGTCAAGCTGGCATGGTCTCT  
 TGGAGGGCGAAAGTTTAAAAAGTTCAATAAAGTCAGAGTCATGAGAGCACTCGATGCTGTGCT  
 CTCCTACAGCCAGTGGGCATTCCAAATGAAAGCCAAAGCAATCACTTTTCTCCAGTCAAGAGA  
 TACAGTTAATTCCTCTCTAATCAACCTGTTAATGAGCATGGAACCAGATGTGATCTATGCAGG  
 ACATGACAAACAAAGCCTGATACCTCCAGTTCTTTGCTGACGAGTCTTAATCAACTAGGCGAG  
 CGGCAACTTCTTTTCAGTGGTAAATGGTCCAAATCTCTTCAGGTTTTTCGAAACTTACATATTG  
 ATGACCAGATAACTCTCATCCAGTATCTTGGATGAGTTTAAATGGTATTGGAAGTAGGATGGAG  
 ATCTTACAAACATGTCTAGTGGGCAGATGCTGTATTTGACCTGATCTAATATTAAATGAACAG  
 CGGATGAAAGAATCATCTATTCTATTCTATGCTTACCATGTGGCAGATACCGCAGGAGTTTG  
 TCAAGCTTCAAGTTAGCCAAGAAGAGTTCTCTGCAATGAAAGTATTACTACTTCTTAATACAAT  
 TCCTTTGGAAGGACTAAGAAGTCAAGCCAGTTTGAAGAGATGAGATCAAGCTACATTAGAGAG  
 CTCATCAAGGCAATTGGTTTGAGGCAAAAGGAGTGTGTTCCAGCTCACAGCGTTTCTATCAGC  
 TCACAAAACCTTCTTGATTAATTTGCATGATCTTGTCAACAACCTTCACTGTACTGCTGAATAC  
 ATTTATCCAGTCCCGGGCGCTCAGTGTGGAATTTCCAGAAATGATGTCTGAAGTTATTGCTGCA  
 CAGTTACCCAAAGATATTGGCAGGGATGGTGAACCACTTCTCTTTTCATAAAAAGTGAATGTCAA  
 TTATTTTTTCAAGAATTAAAGTGTGTTGTTGATGTCTTTCGTTTTCGCTCAGGATTTATGACGCTCG  
 AGTTTTTATAATATTCTGAAGGGAATTCCTGCAGCCCGGGGGATCCACTAGTTCTAGAGGATC  
 CAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAGAAAAATG  
 CTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACA  
 GTTAACAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGGAGGTGTGGGAGGTTTTTT  
 AAAGCAAGTAAAACCTCTACAAATGTGGTATGGCTGATTATGATCCTGCAAGCCTCGTCTCTG  
 GCCGGACCAAGCTATCTGTGCAAGGTCCCGGACCGCGCTCCATGAGCAGAGCGCCCGCGCC  
 GAGGCAAGACTCGGGCGGGCCCTGCCCGTCCACCAGGTCAACAGGCGGTACCGGCCCTCTTC  
 ATCGGGAATGCGCGCGACCTTCAGCATCGCGGGCATGTCCCTGCGCGGACGGGAAGTATCAGCT  
 CGACCAAGCTTGGCGAGATTTTCAGGAGCTAAGGAAGCTAAAATGGAGAAAAAATCACTGGAT  
 ATACCACCGTTGATATATCCCAATGGCATCGTAAGAACATTTTGAGGCATTTCACTCAGTTGC  
 TCAATGTACCTATAACCAGACCGTTTCAGCTGCATTAATGAATCGGCCAACCGCGGGGGAGAGGC  
 GGTTTGCGTATTGGGCGCTCTTCCGCTTCTCTCGCTCACTGACTCGCTCGCTCGGCTCGGCTCGGC  
 TCGCGCGAGCGGTATCAGCTCACTCAAAGGCGGTAAATACGGTTATCCACAGAATCAGGGGATAA  
 CCGAGGAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCCGGTTG  
 CTGGCGTTTTTTCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGA  
 GGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCTCGGAAGCTCCCTCGTGGC

Fig. 9C

CTCTCCTGTTCGGACCCCTGCCGCTTACCGGATACCTGTCCGCCCTTCTCCCTTCGGGAAGCGTG  
GCGCTTTCTCAATGCTCAGCTGTAGGTATCTCAGTTCGGGTGTAGGTGCTTCGCTCCAAGCTGG  
GCTGTGTGCAAGAACCCCGGTTACGCCGACCGCTGCGGCTTATCCGGTAACATATCGTCTTGA  
GTCCAACCCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGA  
GCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGGCTAACTACGGCTACACTAGAA  
GGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTC  
TTGATCCGGCAAAACAAACCCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACG  
CGCAGAAAAAAGGATCTCAAGAAGATCCCTTGAATCTTTTCTACGGGGTCTGACGCTCAGTGGAA  
ACGAAAACTCAGCTTAAGGGAATTTTGGTCACTAGATTATCAAAAAGGATCTTCAOCTAGATCCT  
TTTAAATTAATAATGAAGTTTAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGT  
TACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTTCATCCATAGTTG  
CCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGC  
AATGATACCGGAGAGACCCACGCTCACCGGCTCCAGATTTATCAGCAATRAACCAGCCAGCCGGA  
AGGGCCGAGCGCAGAAAGTGGTCTGCAACTTTATCCGCCCTCCATCCAGTCTATTAATTGTTGCC  
GGGAAGCTAGAGTAAGTAGTTCCGCCAGTTAATAGTTTGGCGCAACGTTGTTGCCATTGCTACAGG  
CATCGTGGTGTACGCTCGTCTGTTGGTATGGCTTCATTACGCTCCGGTTCCCAACGATCAAGG  
CGAGTTACATGATCCCCATGTTGTGCAAAAAAGCGTTAGCTCCTTCGGTCCCTCCGATCGTTG  
TCAGAAGTAAGTTGCCCGCAGTGTATCACTCATGGTTATGGCAGCACTGCATAATTCTCTTAC  
TGTATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAAGTACTCAAOCAAGTCAATTCTGAGAA  
TAGTGTATGCGCGACCGAGTTGCTCTTGCOCGGCGTCAATACGGGATAATAACCGCGCCACATA  
GCAGAACTTTAAAAGTGCTCATCATTTGGAAAACGTTCTTCGGGGCGAAAACTCTCAAGGATCTT  
ACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCAGCATCTTTT  
ACTTTCACCAGGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAGGGGAATAA  
GGCGACACGGAAATGTTGAATACTCATACTCTTCCCTTTTCAATATTATTGAAGCATTATCA  
GGGTTATTGTCTCATGAGCCGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGGGTT  
CCGCGCACATTTCCCCGAAAAGTGCCACCTGACGTCTAAGAAACCATTATTATCATGACATTAA  
CCTATAAAAAATAGGCGTATCACGAGGCCCTTTTCGTC

Fig. 10A

CTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATC  
 AGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGT  
 CGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATCAG  
 TGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCG  
 AGTTTACCACTCCCTATCAGTGATAGAGAAAAGTGAAAGTCGAGTTTACCACTCCCTATCAG  
 GCGGTGTACGGTGGGAGGCCATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCGCCTGGAG  
 ACCCATCCACGCTGTTTTGACCTCCATAGAAGACACCGGGACCGATCCAGCCTCCGCGGCCCC  
 GAATTCGCGGCCACGACCATGAOCATGACCOCTCCACACCAAAGCATCTGGGATGGCOCTACTGCA  
 TCAGATCCAAGGGAACGAGCTGGAGCCCCCTGAACCGTCCGAGCTCAAGATCCCCCTGGAGCGG  
 CCCCCTGGGCGAGGTGTACCTGGACAGCAGCAAGCCCGCCGTGTACAACTACCCCGAGGGCGCCG  
 CCTACGAGTTCAACGCCGCGCGCGCGGCCAACCGCGAGGTCTACGGTCAGACCGGCTCCCTTA  
 CGGCCCGCGGTCTGAGGCTGCGGCGTTCCGGCTCCAACGGCCTGGGGGGTTTCCCCCCTACAC  
 AGCGTGTCTCCGAGCCCCCTGATGCTACTGCAACCGCGCGCGCAGCTGTCCCTTTCTGTCAGC  
 CCCACGGCCAGCAGGTGCCCTACTACCTGGAGAAAGAGCCAGCGGCTACACGGTGGCGGAGGC  
 CGGCCCGCGGCATTCTACAGGCCAAATTCAGATAATCGACGOCAGGGTGGCAGAGAAAGATTG  
 GCCAGTACCAATGACAAAGGAAGTATGGCTATGGAATCTGCCAAGGAGACTCGCTACTGTGCAG  
 TGTGCAATGACTATGCTTCAGGCTACCATTTATGGAGTCTGGTCTCTGTGAGGGCTGCAAGGCTT  
 CTTCAAGAGAAGTATTCAGGACATAACGACTATATGTGTCCAGCCACCAACCAGTGCACCATT  
 GATAAAACAGGAGGAAGAGCTGCCAGGCTGCGCGCTCCGCAAATGCTACGAAGTGGGAATGA  
 TGAAAGGTGGGATACGAAAAGACCGAAGAGGAGGGAGAATGTTGAAACACAAGCGCCAGAGAGA  
 TGATGGGGAGGGCAGGGGTGAAGTGGGCTCTGCTGGAGACATGAGAGCTGCCAACCTTTGGCCA  
 AGCCCGCTCATGATCAAACGCTCTAAGAAGAACAGCCTGGCCTTGTCCCTGACGCGCCGACCAGA  
 TGGTCATGGCCTTGTGGATGCTGAGCCCCCATACTCTATTCCGAGTATGATCTTACCAGACC  
 CTTCAAGTGAAGCTTCGATGATGGGCTTACTGACCAACCTGGCAGACAGGGAGCTGGTTTACATG  
 ATCAACTGGCGGAAGAGGGTGGCAGGCTTTGTGGATTTGACCTCCATGATCAGGTCCACCTTC  
 TAGAATGTGCCCTGGCTAGAGATCTGATGATGGTCTCGTCTGGCGCTCCATGGAGCACCCAGT  
 GAAGCTACIGTTTGCTCCTAACTTGCTCTTGGACAGGAACAGGGAAAATGTTGTAGAGGGCATG  
 GTGGAGATCTTCGACATGCTGCTGGCTACATCATCTCGGTTCGGCATGATGAATCTGCAGGGAG  
 AGGAGTTTGTGTGCCCTCAAATCTATTATTTTGCTTAATTCCTGGAGTGTACACATTTCTGTCCAG  
 CACCTGAAAGTCTCTGGAAGAGAAGGACCATATCCACCGAGTCCCTGGACAAGATCACAGACACT  
 TTGATCCACCTGATGGCCAAGGCAGGCTTGACCTGCAGCAGCAGCACCAGCGGCTGGGCCAGC  
 TCCTCTCATCCTCTCCACATCAGGCACATGAGTAACAAAGGCATGGAGCATCTGTACAGCAT  
 GAAGTGCAAGAACGTGGTGGCCCTCTATGACCTGCTGCTGGAGATGCTGGACGCCACCGCCTA  
 CATGCGGCCACTAGCCGTGGAGGGGCATCCGTGGAGGAGACGGACCAAAGCCACTTTGGCCACTG  
 CGGCTCTACTTCATCGCATTCCTTGCAAAAGTATTACATCACGGGGGAGCCAGAGGGTTTCCC  
 TGCCACAGTCTGAGAGCTCCCTGGCGGAATTCGAGCTCGGTACCCGGGGATCCTCTAGAGGATC  
 CAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATG  
 CTPTATTGTGAAATTGTGATGCTATTGCTTTATTGTACCATTTATAAGCTGCAATAAACAA  
 GTTAACAACAACAATTGCATTTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTF  
 AAAGCAAGTAAAACCTCTACAAATGTGGTATGGCTGATTTATGATCCTGCAAGCCTCGTCTCTG

Fig. 10B

GCCGGACCACGCTATCTGTGCAAGSTCCCGGACGCGCGCTCCATGAGCAGAGCGCCCCGCGCC  
GAGGCAAGACTCGGGCGGGCGCCCTGCCCGTCCCACCAGGTCAACAGCGGTAACCGGCCCTCTTC  
ATCGGGAATGCGCGCGAOCCTTCAGCATCGCGGCATGTCCCCTGGCGGACGGGAAGTATCAGCT  
CGACCAAGCTTGGCGAGATTTCAGGAGCTAAGGAAGCTAAAATGGAGAAAAAATCACTGGAT  
ATACCACCGTTGATATATCCCAATGGCATOGTAAAGAACATTTTGAGGCATTTTCAGTCAGTTGC  
TCAATGTACCTATAACCAGACCGTTTCAGCTGCATTAAATGAATCGGCCAACGCGCGGGGAGAGGC  
CGTTCGCGTATTGGCGCGCTCTTCGCGTTCTCGCTCACTGACTCGCTGCGCTCGGTTCGTTGGC

TGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATAAGGTTATCCACAGAATCAGGGGATAA  
CGCAGGAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCCGCGTTG  
CTGGCGTTTTCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGA  
GGTGGCGAAACCGACAGGACTATAAGATAACCAGGCGTTTCCCGCTGGAAGCTCCCTCGTGCG  
CTCTCTGTTCGACCCCTGCGCGCTTACCGGATACTGTCCGCTTTCTCCCTTCGGGAAGCGTG  
CGCTTTCTCAATGCTCAGCTGTAGGTATCTCAGTTCCGGTGTAGGTGCTTCGCTCCAAGCTGG  
GCTGTGTGCAAGAACCCCGCTTCAGCCCGACCGCTGCGCGCTTATCCGGTAACTATCGTCTTGA  
GTCCAACCCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGA  
GCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAA  
GGACAGTATTTGCTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTC  
TTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACG  
CGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGA  
ACGAAAACCTCAGCTTAAGGATTTTGGTTCATGAGATTATCAAAAAGGATCTTCACCTAGATCT  
TTTAAATTAAAAATGAAGTTTAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGT  
TACCAATGCTTAAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTTCATCCATAGTTG  
CCTGATCCCCGTGCTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCA  
ATGATACCGGAGACCCACGCTCACCGGCTCCAGATTTATCAGCAATRAACCAGCCAGCCGGAA  
GGGCGGAGCGCAGAAGTGGTCCGCAACTTTATCCGCTCATCCAGTCTATTAAATTGTTGCCG  
GGAAGCTAGAGTAAGTAGTTTCGCCAGTTAATAGTTTGGCGCAACGTTGTTGCCATTTGCTACAGGC  
ATCGTGGTGTACGCTCGTCTGTTTGGTATGGCTTCATTCAGCTCCCGTTCCCAACGATCAAGGC  
GAGTACATGATCCCCATGTTGTGCAAAAAAGCGGTTAGCTCCTTCGGTCCCTCGGATCGTTGT  
CAGAAGTAAGTTGGCGCAGTGTATCACTCATGGTTATGGCAGCACTGCATAATTCTCTTACT  
GTCTATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATTCTGAGAAT  
AGTGTATGCGGCGACGAGTTGCTCTTGCCCGGCGTCAATACGGGATAATACCGGCGCACATAG  
CAGAACTTTAAAGTGCTCATTCATTGGAAAACGTTCTTCGGGGCGAAAACCTCTCAAGGATCTTA  
CCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCAACCACTGATCTTCAGCATCTTTTA  
CTTTCACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAGGGAATAAG  
GGCGACACGGAAATGTTGAATACTCATCTCTTCTTTTCAATATTATTGAAGCATTTATCAG  
GGTTATGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGGGTTTC  
CGCGCACATTTCCCCGAAAAGTGCCACCTGACGTCTAAGAAACCATTATTATCATGACATTAAC  
CTATAAAAATAGGCGTATCACGAGGCCCTTTTCGTC

# Conditional Knock-Out Strategy 1

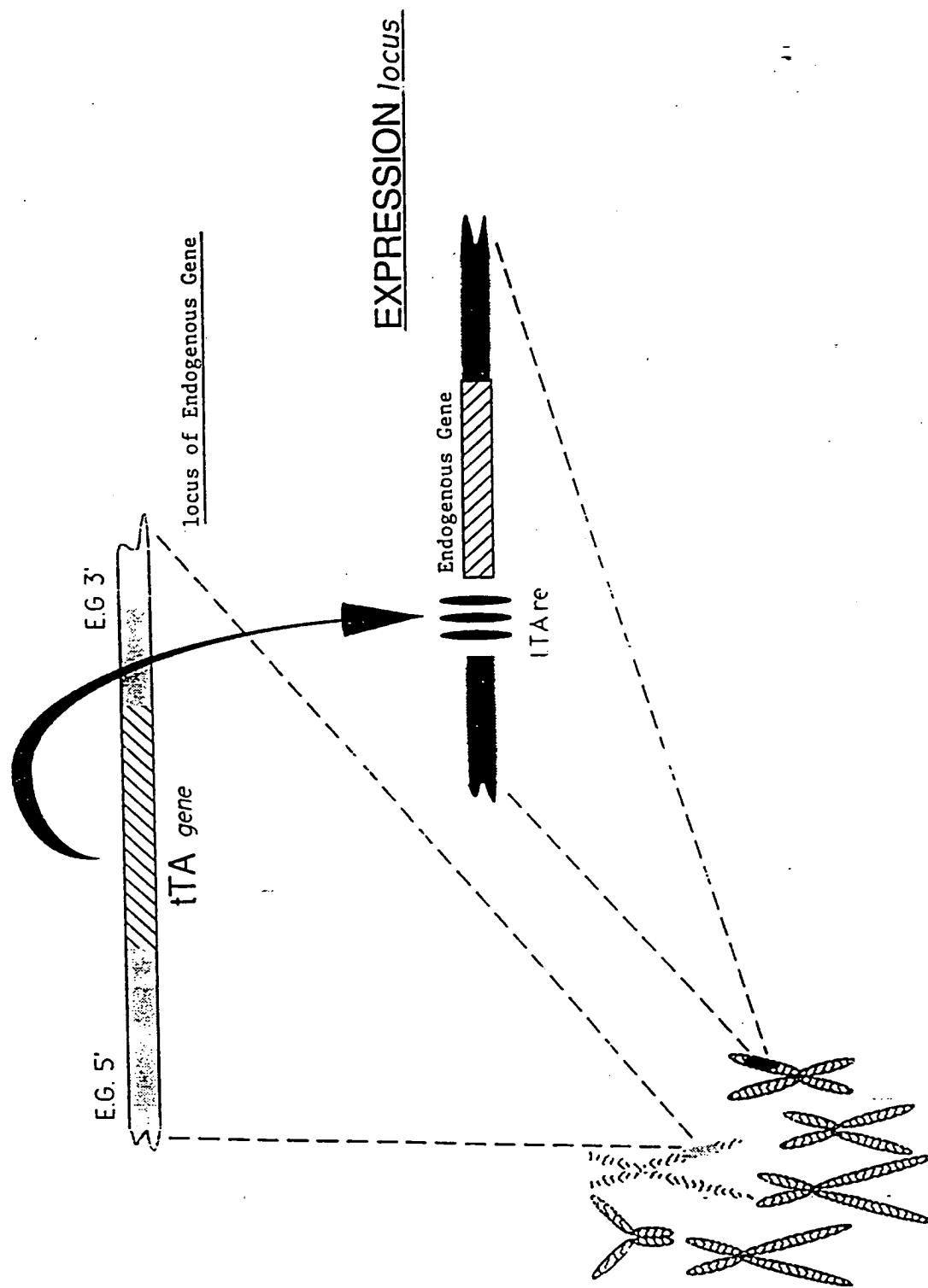
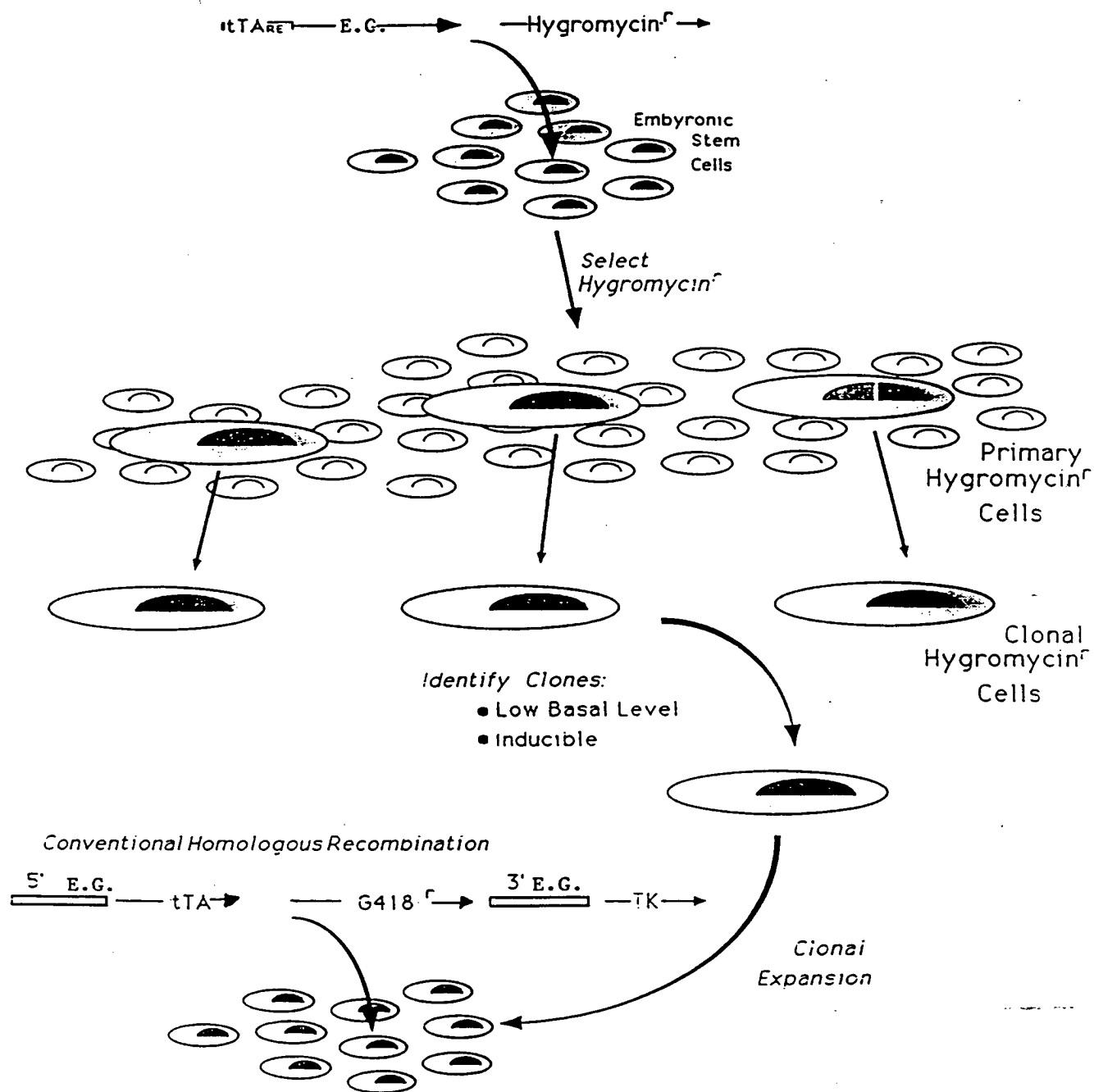


Fig. 12

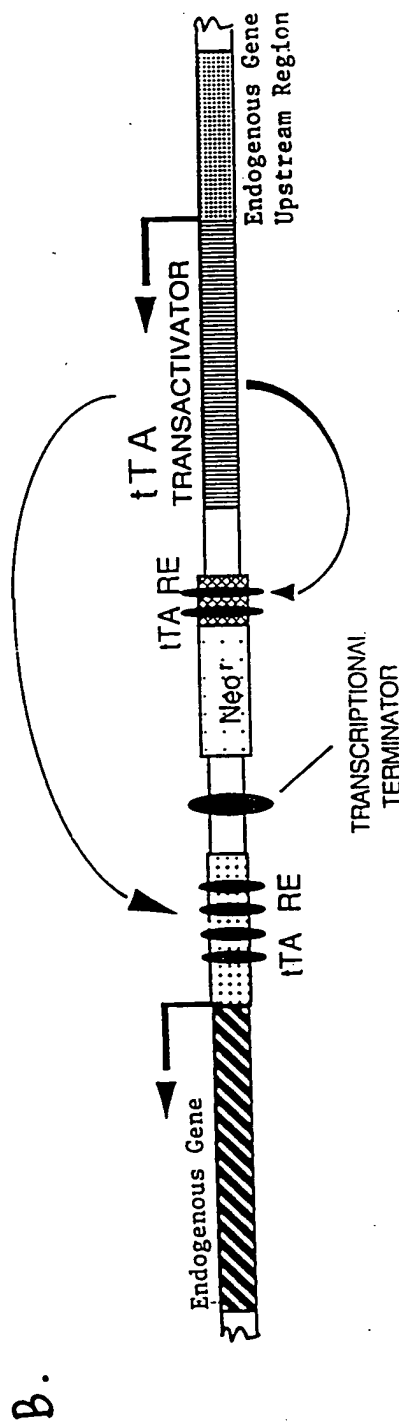
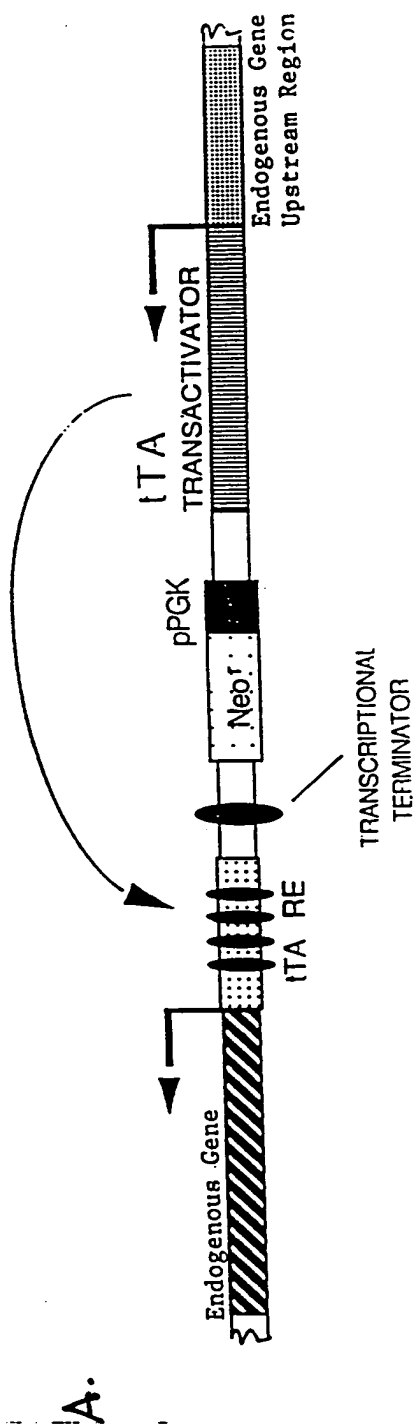
## Conditional Knock-Out Strategy 2



Identify clones with low basal activity of endogenous gene (near untransformed levels).  
 Identify among these those which respond to tTA (by transient expression).  
 Perform homologous recombination into endogenous locus.

Fig. 13

# Conditional Knock-Out Strategy 3





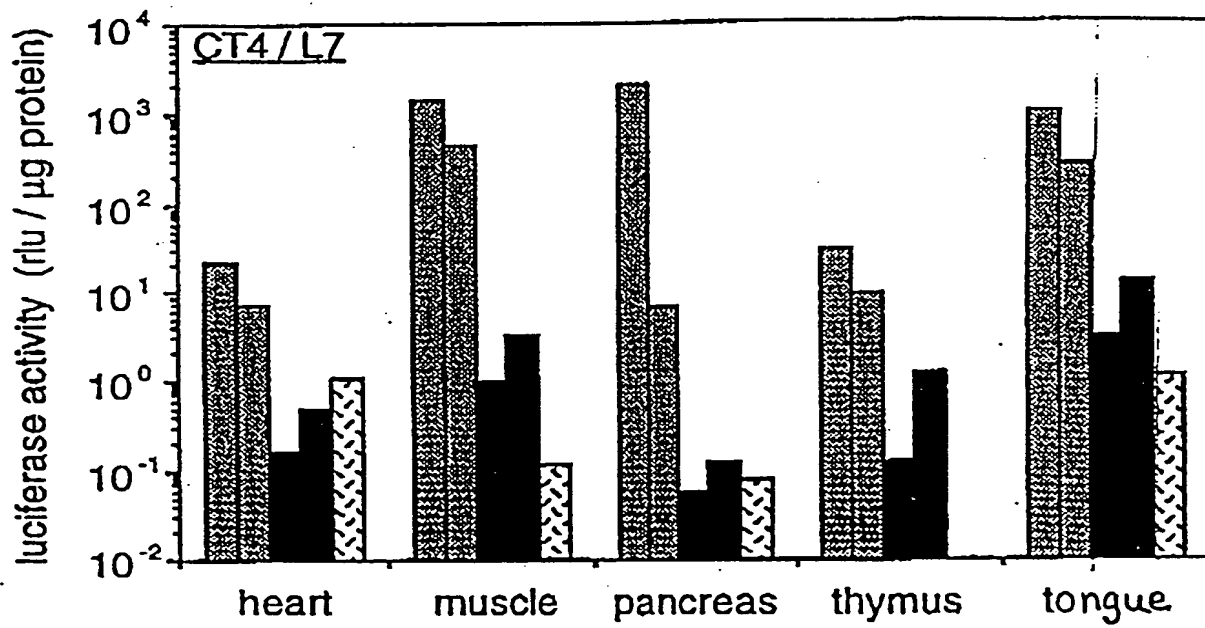


Figure 14